

Amendment under 37 CFR 1.111
Serial No. 09/728,889
December 6, 2001

*A1
cancel'd
sub
control*
a programmable microprocessor operatively connected to said inverter and including a program for controlling said inverter that includes means for operating said induction machine using pole phase modulation.--

a2
--9. (Amended) A system according to claim 1, wherein said microprocessor further includes means for controlling said inverter by vector control.--

a3
--11. (Amended) A system comprising:
an induction machine with a stator and a rotor, said stator having a plurality of phase windings;
a position sensor operatively connected to said induction machine for providing a position indication that is indicative of a relative position of said rotor and said stator;
an inverter having a plurality of solid-state switches with appropriate controls and having the same number of phases as said toroidal induction machine, said inverter being connected to selectively energize said windings; and
a programmable microprocessor operatively connected and including a program to implement vector control of said induction machine, said microprocessor includes means for controlling said

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a3
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inverter so that said induction machine operates with pole phase
modulation.--

a4
--14. (Amended) An automotive propulsion system including a
system comprising:

an induction machine with a toroidally wound stator and a
squirrel cage rotor, said toroidally wound stator having a
plurality of phase windings;

a position sensor operatively connected to said induction
machine for providing a position indication that is indicative of
a relative position of said rotor and said stator;

an inverter having a plurality of solid-state switches and a
control system, said inverter having the same number of phases as
said toroidal induction machine, said inverter being connected to
selectively energize said windings; and

a programmable digital signal processor operatively
connected to said induction machine, said programmable digital
signal processor including a program to implement vector control
of said induction machine, said programmable digital signal
processor includes means for controlling said inverter so that
said induction machine operates with a predetermined number of
poles using pole phase modulation. --
